

MULTIMEDIA



UNIVERSITY

STUDENT IDENTIFICATION NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2016/2017

**BBF 2154 – INVESTMENT**

(All sections / Groups)

7 MARCH 2017

9:00 – 11:00 a.m

(2 Hours)

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### INSTRUCTIONS TO STUDENT

1. This Question paper consists of 3 pages with 4 Questions only.
2. Answer **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Students are allowed to use non-programmable scientific and financial calculators.
4. Please write all your answers in the Answer Booklet provided.

**QUESTION 1**

(a) Assume you sell 100 shares of PAWZYME Corporation short at RM43. You also buy a 40 call option for RM4.80 to protect against the stock price going up.

(i) If the stock ends up at RM60, what will be your overall gain or loss? (5 marks)

(ii) If the stock ends up at RM20, what will be your overall gain or loss? (5 marks)

(iii) If you have an unprotected short sale position (no call option), what is the most you could lose? (1 mark)

(iv) If you had a limit order to buy the stock and close out the position at RM54, what is the most you could lose? (2 marks)

(b) JOON JAE Corporation foresees a non-constant growth pattern for dividends. Dividends at the end of year 1 are RM4.00 per share and are expected to grow by 10% per year until the end of year 4. After year 4, dividends are expected to grow at 6%. All dividends are to be discounted back to present at a 14% rate.

(i) Estimate the dividend for year 2 until year 4. (3 marks)

(ii) Find the NPV for all dividends from year 1 until year 4. (3 marks)

(iii) Find the value of dividend from the fifth year onwards. (2 marks)

(iv) Find the present value of year 4 stock price. (2 marks)

(v) What is the total present value of stock? (2 marks)

(Total: 25 marks)

**QUESTION 2**

(a) Key indicator series is one of the tools of technical analysis to forecast future market movement. Technical indicator series may be detected for bearish and bullish trends. In addition, investors may observe unsuccessful market behavior and choose the opposite position. Examine **FOUR** ways under the "contrary opinion rules". (8 marks)

(b) Industry life cycles is a concept relating to the different stages an industry will go through, from the first product entry to its eventual decline. Generally, the growth phase is divided into two parts; growth (accelerating growth) and expansion (decelerating growth). Discuss **FIVE** stages of industry life cycle and the pattern of dividend payment over the cycle. (10 marks)

(c) BO GUM has invested in a bond that gives 12% coupon interest and the par value of the bond is RM1000. It is also currently priced at RM1200 with 12 years to maturity.

(i) Calculate the yield to maturity (YTM) of this bond, using semi-annual compounding. (3 marks)

(ii) Calculate the yield to call (YTC) of this bond, using semi-annual compounding, if the call of the bond can be made in 6 years at a price of RM1030. (4 marks)

(Total: 25 marks)

Continued ...

**QUESTION 3**

(a) Assume the risk-free rate ( $R_F$ ) is 8%, the market rate of return ( $K_M$ ) is 12%, the market standard deviation ( $\sigma_M$ ) is 10%, and the standard deviation of the portfolio ( $\sigma_P$ ) is 12%.

(i) Using the formula for the capital market line, calculate the expected value of portfolio ( $K_P$ ). (3 marks)

(ii) Assume the portfolio standard deviation ( $\sigma_P$ ) has increased to 16%. Using the formula for the capital market line, calculate the expected value of portfolio ( $K_P$ ). (3 marks)

(iii) Compare the answer in part (i) and part (ii). In terms of capital market theory, explain why the expected value of portfolio ( $K_P$ ) has increased or decreased. (2 marks)

(b) The capital asset pricing model (CAPM) is a model that describes the relationship between systematic risk and expected return for assets, particularly stocks. CAPM is widely used throughout finance for the pricing of risky securities and generating the expected returns for assets. Examine the SEVEN assumptions of CAPM. (14 marks)

(c) Explain the meaning of efficient frontier and discuss the relevance of the efficient frontier to portfolio selection. (3 marks)

(Total: 25 marks)

**QUESTION 4**

(a) An investment portfolio can be thought of as a pie that is divided into pieces of varying sizes, representing a variety of asset classes and types of investments to accomplish an appropriate risk-return portfolio allocation. Below is a portfolio consisting of the following stocks:

Stock	Investment Amount	Beta	Expected return
Vincci	RM40,000	1.80	25%
Seed	RM32,000	1.30	20%
P & Co	RM60,000	0.80	11%
Padini	RM43,000	1.05	13%

The Treasury bill rate is 4% and the expected return on the market portfolio is 7%.

(i) What is the expected return of the portfolio? (5 marks)

(ii) Calculate the beta of the portfolio. (5 marks)

(iii) Calculate the required rate of return. (2 marks)

Continued ...

(b) Dennis has a portfolio that consists of two stocks, namely Stock A & Stock B. Both stocks are evenly weighted. The standard deviation for Stock A is 3.9 and for Stock B is 5.1. The correlation coefficient for both stocks is -0.70.

(i) Calculate the portfolio standard deviation. (2 marks)

(ii) Define standard deviation. (2 marks)

(iii) Compare and describe the portfolio standard deviation with standard deviation for both Stock A and Stock B. (2 marks)

(iv) What is the standard deviation of treasury bill? (1 mark)

(c) The efficient market hypothesis (EMH) is an investment theory that states it is impossible to "beat the market" because stock market efficiency causes existing share prices to always incorporate and reflect all relevant information. Discuss the **THREE** types of efficient market hypothesis. (6 marks)

(Total: 25 marks)

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